

CLAIMS

- 1.- A calibration method for calibrating a fixed format emissive display device having a plurality of pixels, each pixel comprising at least three sub-pixels for emitting light of different real primary colours, the method comprising
 - 5 determining, for each real primary colour separately, a virtual target primary colour which can be reached by at least 80% of the pixels of the display,
 - determining a colour gamut defined by the determined virtual target primary colours, and
 - 10 adjusting the drive currents to the sub-pixels to achieve a colour inside the determined colour gamut.
- 2.- The calibration method of claim 1, wherein determining the color co-ordinates of a virtual target primary colour comprises determining a
 - 15 centre of gravity of a cloud formed by the color co-ordinates of the corresponding real primary colours of all pixels of the display device.
- 3.- The calibration method of claim 2, wherein the color co-ordinates determined for a virtual target primary colour differ from the centre of gravity of a cloud by up to 20%.
- 20 4.- The calibration method of claim 2, furthermore comprising determining a line of gravity of a cloud formed by the color co-ordinates of the real primary colours of all pixels of the display device corresponding to the virtual target primary colour to be determined.
- 5.- The calibration method of claim 4, furthermore comprising choosing the
 - 25 color co-ordinates of the virtual target primary colour on the line of gravity or within a deviation of at most 20 % from the line of gravity.
6. The calibration method according to claim 1, wherein a target luminance for each target virtual primary is determined such that all or substantially all of the real primaries are able to realize the target luminance of the
 - 30 corresponding virtual primary.
- 7.- The calibration method of claim 1, including determining a virtual target

primary colour that all the sub-pixels of the display device are able to achieve.

- 8.- The calibration method of claim 1, including determining a colour gamut that all the sub-pixels of the display device are able to achieve.
- 5 9.- The calibration method of claim 1, wherein linear combinations of the virtual target primary colours are used to form the colour gamut.
- 10.- The calibration method of claim 1, wherein determining, for each primary colour separately, the color co-ordinates of a virtual target primary colour, depends on the application in which the display device is used.
- 10 11.- The calibration method according to claim 10, wherein the virtual target primary colours are determined so as to give better results with respect to colour saturation than with respect to colour uniformity.
- 12.- The calibration method according to claim 10, wherein the virtual target primary colours are determined so as to give better results with respect to colour uniformity than with respect to colour saturation.
- 15 13.- The calibration method according to claim 7, wherein the determination of the target luminance of a virtual target primary colour depends on the application in which the display device is to be used.
- 14.- The calibration method according to claim 7, wherein the target luminance of the virtual target primaries is selected so as to provide improved brightness uniformity.
- 20 15.- The calibration method according to claim 7, wherein the target luminance of the virtual target primaries is selected so as to provide a higher absolute brightness value.
- 25 16.- The calibration method according to claim 1, wherein determining, for each primary colour separately, the color coordinates of the virtual target primary colour is performed after virtual target primary colours have been determined a first time.
- 17.- The calibration method according to claim 7, wherein determining the target luminance of the virtual target primary colours is performed after virtual target primary colours have been determined a first time.
- 30 18.- The calibration method according to claim 1, wherein the number of

virtual target primary colours equals the number of real primary colours.

- 19.- The calibration method of claim 1, wherein adjusting the drive current to the sub-pixels to achieve a colour inside the determined colour gamut comprises adjusting the drive current, not only of a first real primary colour which would have a negative drive stimulus value, but also of at least one other real primary colour which has a positive drive stimulus value.
- 20.- The calibration method of claim 19, wherein adjusting the drive currents of the first real primary colour and the at least one other real primary colour is such that the colour to be achieved inside the determined colour gamut is projected orthogonally on a plane in a stimulus co-ordinate system, which plane is span by stimulus co-ordinates of two real primary colours which would not have a negative drive stimulus.
21. A fixed format emissive display device calibrated in accordance with claim 1.